

PHARMACY COVERAGE GUIDELINE

RADICAVA ORS® (edaravone) oral

This Pharmacy Coverage Guideline (PCG):

- Provides information about the reasons, basis, and information sources we use for coverage decisions
- Is not an opinion that a drug (collectively “Service”) is clinically appropriate or inappropriate for a patient
- Is not a substitute for a provider’s judgment (Provider and patient are responsible for all decisions about appropriateness of care)
- Is subject to all provisions e.g. (benefit coverage, limits, and exclusions) in the member’s benefit plan; and
- Is subject to change as new information becomes available.

Scope

- This PCG applies to Commercial and Marketplace plans
- This PCG does not apply to the Federal Employee Program, Medicare Advantage, Medicaid or members of out-of-state Blue Cross and/or Blue Shield Plans

Instructions & Guidance

- To determine whether a member is eligible for the Service, read the entire PCG.
- This PCG is used for FDA approved indications including, but not limited to, a diagnosis and/or treatment with dosing, frequency, and duration.
- Use of a drug outside the FDA approved guidelines, refer to the appropriate Off-Label Use policy.
- The “Criteria” section outlines the factors and information we use to decide if the Service is medically necessary as defined in the Member’s benefit plan.
- The “Description” section describes the Service.
- The “Definition” section defines certain words, terms or items within the policy and may include tables and charts.
- The “Resources” section lists the information and materials we considered in developing this PCG
- **We do not accept patient use of samples as evidence of an initial course of treatment, justification for continuation of therapy, or evidence of adequate trial and failure.**
- Information about medications that require precertification is available at www.azblue.com/pharmacy. You must fully complete the [request form](#) and provide chart notes, lab workup and any other supporting documentation. The prescribing provider must sign the form. Fax the form to BCBSAZ Pharmacy Management at (602) 864-3126 or email it to Pharmacyprecert@azblue.com.

Criteria:

- **Criteria for initial therapy:** Radicava ORS (edaravone) oral suspension is considered **medically necessary** and will be approved when **ALL** of the following criteria are met:
 1. Prescriber is a physician specializing in the patient’s diagnosis or is in consultation with a Neurologist, Neuromuscular Disease Specialist, or a physician specializing in the treatment of ALS
 2. Individual is 18 years of age or older
 3. A confirmed diagnosis of “definite” or “probable” amyotrophic lateral sclerosis (ALS) based on the application of the El Escorial or the revised Airlie House diagnostic criteria ([see Definitions section](#))
 4. Disease duration is 2 years or less

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5. Individual lives independently
6. Individual has a score of 2 points or more on each item of the ALS Functional Rating Scale–Revised (ALSFRS-R) [i.e., has retained most or all activities of daily living] ([see Definitions section](#))
7. Individual has a percent-predicted force vital capacity (FVC) greater than or equal to 80% (i.e., has normal respiratory function)
8. Documented failure, contraindication per FDA label, intolerance, or not a candidate to riluzole
9. Individual does not have severe renal impairment (eGFR less than 30 mL/min/1.73 m²)

Initial approval duration: 6 months

- **Criteria for continuation of coverage (renewal request):** Radicava ORS (edaravone) oral suspension is considered **medically necessary** and will be approved when **ALL** of the following criteria are met (**samples are not considered for continuation of therapy**):
1. Individual continues to be seen by a physician specializing in the patient's diagnosis or is in consultation with a Neurologist, Neuromuscular Disease Specialist, or a physician specializing in the treatment of ALS
 2. Individual's condition has responded while on therapy with response defined as **ALL** of the following:
 - a. Documented evidence of efficacy, disease stability and/or improvement by continuing to have scores of 2 points or better on each individual item of the ALSFRS-R score
 - b. Continues to live independently by retaining most activities of daily living
 - c. Does not require invasive ventilation
 - d. No evidence individual has developed any significant unacceptable adverse drug reactions that may exclude continued use
 3. Individual has been adherent with the medication
 4. Individual does not have severe renal impairment (eGFR less than 30 mL/min/1.73 m²)

Renewal duration: 12 months

- Criteria for a request for non-FDA use or indication, treatment with dosing, frequency, or duration outside the FDA-approved dosing, frequency, and duration, refer to one of the following Pharmacy Coverage Guideline:
1. **Off-Label Use of Non-Cancer Medications**
 2. **Off-Label Use of Cancer Medications**

Description:

Radicava ORS (edaravone) oral suspension is indicated for the treatment of amyotrophic lateral sclerosis (ALS). Edaravone is also available as an intravenous infusion as Radicava.

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Amyotrophic lateral sclerosis (ALS), also known as Lou Gehrig's disease and Charcot disease, is a rare disease that affects nerve cells in the brain and the spinal cord leading to progressive muscle weakness and premature death. ALS is also known as motor neuron disease (MND).

The clinical standard for the diagnosis of ALS is the revised El Escorial World Federation of Neurology criteria, also known as the Airlie House criteria. The degree of certainty of the diagnosis is increased by the number of body regions that demonstrate upper motor neuron (UMN) and lower motor neuron (LMN) signs. The body is divided into 4 regions: bulbar (muscles of face, mouth, and throat), cervical (muscles of the back of the head and neck, the shoulders and upper back, and the upper extremities), thoracic (muscles of the chest and abdomen and the middle portion of the spinal muscles), and lumbosacral (muscles of the lower back, groin, and lower extremities). UMN signs are mild weakness, stiffness, spasticity, and abnormally brisk reflexes; LMN signs are progressive muscle weakness, atrophy/wasting, fasciculations, and loss of reflexes and muscle tone.

By the revised El Escorial criteria, the diagnosis of ALS requires evidence of LMN degeneration by clinical, electrophysiological, or neuropathological examination; evidence of UMN degeneration by clinical examination; and the presence of progressive spread of symptoms or signs within a region or to other regions, as determined by history or examination. Hallmark findings in the electrodiagnosis of ALS are normal sensory nerve conduction studies and abnormal motor nerve conduction studies, with reduced motor compound muscle action potentials. The needle exam shows changes characteristic of ongoing denervation and reinnervation of muscles.

The revised El Escorial criteria also requires the absence of electrophysiologic and pathologic evidence of other disease processes that might explain the signs of lower and/or upper motor neuron degeneration, and the absence of neuroimaging evidence of other disease processes that might explain the observed clinical and electrophysiologic signs.

In 2008, the Awaji-shima ALS criteria were proposed for the diagnosis of ALS, given that approximately 21% of patients die from ALS without having ever met the El Escorial criteria for the disease. Although similar to the revised El Escorial criteria, the newer Awaji-shima criteria differ by allowing electrodiagnostic and clinical criteria for LMN signs to be combined to determine if a single limb is abnormal, and by permitting fasciculation potentials by needle electromyography to be used as evidence of ongoing denervation in a muscle with evidence of neurogenic change. In 2019 the Gold Coast criteria for ALS consensus diagnostic criteria was proposed to simplify the diagnosis.

The ALS Functional Rating Scale-Revised (ALSFRS-R) is a questionnaire that measures and evaluates the decline in physical function over time. The scale consists of 12 questions that evaluate fine motor, gross motor, bulbar, and respiratory function of individuals with ALS. Items evaluated include speech, salivation, swallowing, handwriting, cutting food, dressing/hygiene, turning in bed, walking, climbing stairs, dyspnea, orthopnea, and respiratory insufficiency. Each item is scored from 0-4, with higher scores representing greater functional ability. The ALSFRS-R shows close agreement with objective measures of muscle strength and pulmonary function, good construct validity and is sensitive to change in the patient's condition, and it shows test-retest reliability and is consistent. Therapy that results in a change of at least 20% in the slope of the ALSFRS-r is considered meaningful.

Riluzole was the first FDA approved drug to treat ALS. It is an oral medication that acts to slow the progression ALS symptoms and prolong life. It protects motor nerves from further deterioration by reducing glutamate levels in the brain and spinal cord by blocking its release from nerve terminals. Other mechanisms have been proposed.

Radicava ORS (edaravone) is a member of the substituted 2-pyrazolin-5-one class. The mechanism by which edaravone exerts its therapeutic effect in patients with ALS is unknown. Edaravone is a free radical scavenger

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that is thought to reduce oxidative stress, which has been implicated in the pathogenesis of ALS. Evidence for the benefit of edaravone is clearest in patients with early ALS. Additional data are needed to clarify the efficacy of edaravone for people in different stages of the illness. Edaravone may slow functional deterioration in some patients with ALS.

Definitions:

UMN: Upper motor neuron

LMN: Lower motor neuron

ALS Association: El Escorial World Federation of Neurology for the diagnosis of ALS

Criteria for the diagnosis of Amyotrophic Lateral Sclerosis

The diagnosis of ALS requires the presence of

- 1) Signs of lower motor neuron (LMN) degeneration by clinical, electrophysiological or neuropathologic examination,
- 2) Signs of upper motor neuron (UMN) degeneration by clinical examination, and
- 3) Progressive spread of signs within a region or to other regions, together with the absence of
- 4) Electrophysiological evidence of other disease processes that might explain the signs of LMN and/or UMN degenerations; and
- 5) Neuroimaging evidence of other disease processes that might explain the observed clinical and electrophysiological signs.

Clinical features in the diagnosis of ALS

Patients with signs of LMN degeneration (weakness, atrophy/wasting and clinical fasciculation's) and UMN degeneration (spasticity, pathologic reflexes, etc.) may be suspected as having ALS. Careful history, physical and neurological examination must search for further clinical evidence of LMN and UMN signs in four regions of the central nervous system.

Clinical features required for the diagnosis of ALS

- 1) Signs of LMN degeneration (weakness, atrophy/wasting and clinical fasciculations) in one or more of the four regions (bulbar, cervical, thoracic, lumbosacral). LMN findings in a region are without regard to right or left but are indicative of the level of neuraxis involved. Therefore, spread of weakness, wasting and fasciculations to another region is more important than spread from right to left or vice-versa.
- 2) Signs of UMN degeneration (increased tone or increased tendon reflexes, spasticity, pseudobulbar features, Hoffmann reflex and extensor plantar response) in one or more of the four regions. These UMN signs are clinically appreciated best in the bulbar, cervical and lumbosacral regions. UMN findings in a region are also without regard to right or left. Once the physical and neurological examinations provide information on the presence or absence of LMN and UMN signs in the four regions (bulbar, cervical, thoracic, lumbosacral) they must be ordered topographically in the manner to determine the certainty of the diagnosis of ALS.
- 3) The topographical location of certain UMN and LMN signs in four regions of the CNS together with progression of these signs determines the certainty of the diagnoses of ALS. Progression is a cardinal feature of the clinical diagnosis of ALS. Progression of signs within a region and progression of signs to involve other regions are crucial to the diagnosis.

Clinical examinations should be repeated at least every six (6) months to assess progression.

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Cases which meet the topographical criteria for probable or definite ALS, but which lack progression during the twelve (12) month period diagnosis should be designated as possible ALS.

EI Escorial World Federation of Neurology criteria & Awaji-shima criteria:

Definite ALS:

Clinically definite ALS is defined by UMN and LMN signs in the bulbar region and at least 2 of the other spinal regions or in 3 spinal regions

Awaji-shima definite ALS is defined by clinical or electrophysiological evidence by the presence of LMN as well as UMN signs in the bulbar region and at least two spinal regions or the presence of LMN and UMN signs in 3 spinal regions

Probable ALS:

Clinically probable ALS is defined as UMN and LMN signs in at least 2 regions with UMN in a region above LMN signs

Awaji-shima probable ALS is defined by clinical or electrophysiological evidence by the presence of LMN and UMN signs in at least 2 regions with some UMN signs necessarily rostral to (above) the LMN signs

Clinically Probable Laboratory Supported ALS:

Clinically probable laboratory supported ALS is defined as UMN and LMN signs in 1 region or UMN signs in 1 region coupled with LMN signs by electromyography (EMG) in at least 2 limbs

Possible ALS:

Clinically possible ALS is defined as UMN and LMN signs in 1 body region, or UMN signs alone in at least 2 regions, or LMN signs in regions above UMN signs

Awaji-shima possible ALS is defined when clinical or electrophysiological signs of UMN and LMN dysfunction are found only in one region or UMN signs are found alone in two or more regions or LMN signs are found rostral to UMN signs

Clinically Suspected ALS:

Pure LMN syndrome in 2 or more regions with other causes of LMN disease adequately excluded

Gold Coast criteria for ALS Consensus diagnostic criteria proposed in 2019 to simplify the diagnosis:

- Progressive UMN and LMN symptoms and signs in one limb or body segment, **OR**
- Progressive LMN symptoms and signs in at least two body segments, **AND**
- Absence of electrophysiologic, neuroimaging, and pathologic evidence of other disease processes that might explain the signs of LMN and/or UMN degeneration

An advantage of the Gold Coast criteria is the establishment of the diagnosis of ALS for patients with isolated LMN signs. It also establishes the diagnosis for patients who would be labeled with "possible ALS" by the EI Escorial criteria. This represents a simplification of the diagnostic process without the likelihood of excluding patients with the disease.

The diagnostic sensitivity of the Gold Coast criteria is similar to the revised EI Escorial and Awaji criteria for definite, probable, or possible ALS. The Gold Coast criteria is more sensitive than the revised EI Escorial or Awaji criteria for definite or probable ALS, including those with lower limb and bulbar-onset ALS. The

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specificity is similar among the three criteria.

Supportive clinical features

Clinical features that support the diagnosis of ALS include one or more of the following:

- 1) Abnormal pulmonary function test not explained by other causes
- 2) Abnormal speech studies not explained by other causes
- 3) Abnormal swallowing studies not explained by other causes
- 4) Abnormal larynx function studies not explained by other causes
- 5) Abnormal isokinetic or isometric strength test in clinically uninvolved muscles
- 6) Abnormal muscle biopsy with evidence of denervation

Inconsistent clinical features

Clinical findings inconsistent with the diagnoses of ALS include one or more of the following not explained by physiological changes associated with aging or other disease processes:

- 1) Sensory dysfunction
- 2) Sphincter abnormalities
- 3) Autonomic nervous system dysfunction
- 4) Anterior visual pathway abnormalities
- 5) Movement abnormalities associated with probable Parkinson's disease defined by DATATOP criteria
- 6) Cognitive abnormalities associated with clinical Alzheimer's disease defined by NINCDS-ADRDA criteria

Types of ALS

The clinical signs of progressive LMN and UMN degeneration seen in ALS may:

- a) occur alone (sporadic ALS),
- b) be present incidentally with other pre-existing disease processes that have not developed in parallel with the ALS (coexistent sporadic ALS),
- c) occur in association with laboratory-defined or epidemiologically defined abnormalities that are time-linked to the ALS (ALS-related syndromes), or
- d) occur in association with clinical, genetic or epidemiological features which develop in parallel with the ALS (ALS variants)

A proposed a system of stages, standardized as proportions of elapsed time through the course of ALS. The milestones, and their typical time of occurrence, are as follows:

- Stage 1: Symptom onset (involvement of first region)
- Stage 2A: Diagnosis (35% of the way through the disease course)
- Stage 2B: Involvement of second region (38%)
- Stage 3: Involvement of third region (61%)
- Stage 4A: Need for gastrostomy (77%)
- Stage 4B: Need for noninvasive ventilation (80%)

The Amyotrophic Lateral Sclerosis Functional Rating Scale (ALSFRS-R):

An instrument for evaluating the functional status of patients with ALS. It can be used to monitor functional change in a patient over time. The higher the score the more function is retained. Therapy that results in a change of at least 20% in the slope of the ALSFRS-R is considered meaningful.

Item 1: SPEECH

- 4: Normal speech process
- 3: Detectable speech disturbance
- 2: Intelligible with repeating

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- 1: Speech combined with non-vocal communication
- 0: Loss of useful speech

Item 2: SALIVATION

- 4: Normal
- 3: Slight but definite excess of saliva in mouth; may have nighttime drooling
- 2: Moderately excessive saliva; may have minimal drooling (during the day)
- 1: Marked excess of saliva with some drooling
- 0: Marked drooling; requires constant tissue or handkerchief

Item 3: SWALLOWING

- 4: Normal eating habits
- 3: Early eating problems – occasional choking
- 2: Dietary consistency changes
- 1: Needs supplement tube feeding
- 0: NPO (exclusively parenteral or enteral feeding)

Item 4: HANDWRITING

- 4: Normal
- 3: Slow or sloppy; all words are legible
- 2: Not all words are legible
- 1: Able to grip pen, but unable to write
- 0: Unable to grip pen

Item 5a: CUTTING FOOD AND HANDLING UTENSILS

Patients without gastrostomy: Use 5b if > 50% is through g-tube

- 4: Normal
- 3: Somewhat slow and clumsy, but no help needed
- 2: Can cut most foods (> 50%), although slow and clumsy; some help needed
- 1: Food must be cut by someone, but can still feed slowly
- 0: Needs to be fed

Item 5b: CUTTING FOOD AND HANDLING UTENSILS

Patients with gastrostomy: 5b option is used if the patient has a gastrostomy and only if it is the primary method (> 50%) of eating

- 4: Normal
- 3: Clumsy, but able to perform all manipulations independently
- 2: Some help needed with closures and fasteners
- 1: Provides minimal assistance to caregiver
- 0: Unable to perform any aspect of task

Item 6: DRESSING AND HYGIENE

- 4: Normal function
- 3: Independent and complete self-care with effort or decreased efficiency
- 2: Intermittent assistance or substitute methods
- 1: Needs attendant for self-care
- 0: Total dependence

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Item 7: TURNING IN BED AND ADJUSTING BED CLOTHES

- 4: Normal function
- 3: Somewhat slow and clumsy, but no help needed
- 2: Can turn alone, or adjust sheets, but with great difficulty
- 1: Can initiate, but not turn or adjust sheets alone
- 0: Helpless

Item 8: WALKING

- 4: Normal
- 3: Early ambulation difficulties
- 2: Walks with assistance
- 1: Non-ambulatory functional movement
- 0: No purposeful leg movement

Item 9: CLIMBING STAIRS

- 4: Normal
- 3: Slow
- 2: Mild unsteadiness or fatigue
- 1: Needs assistance
- 0: Cannot do

Item 10: DYSPNEA

- 4: None
- 3: Occurs when walking
- 2: Occurs with one or more of the following: eating, bathing, dressing (ADL)
- 1: Occurs at rest: difficulty breathing when either sitting or lying
- 0: Significant difficulty: considering using mechanical respiratory support

Item 11: ORTHOPNEA

- 4: None
- 3: Some difficulty sleeping at night due to shortness of breath, does not routinely use more than two pillows
- 2: Needs extra pillows in order to sleep (more than two)
- 1: Can only sleep sitting up
- 0: Unable to sleep without mechanical assistance

Item 12: RESPIRATORY INSUFFICIENCY

- 4: None
- 3: Intermittent use of BiPAP
- 2: Continuous use of BiPAP during the night
- 1: Continuous use of BiPAP during day & night
- 0: Invasive mechanical ventilation by intubation or tracheostomy

Resources:

Radicava ORS (edaravone) oral suspension product information, revised by Mitsubishi Tanabe Pharma America, Inc. 05-2022. Available at DailyMed <http://dailymed.nlm.nih.gov>. Accessed June 01, 2022.



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